Quick Reads From NSF.gov

April 30, 2018

01

Hijacking plant biology to fight Ebola virus

In 2014, officials in the West African nation of Guinea reported an outbreak of Ebola, a deadly zoonotic disease that jumps from infected bats to humans. The outbreak quickly became a global epidemic. In response, NSF invited researchers to mobilize and apply for Rapid Response Research (RAPID) awards to investigate the Ebola virus and offer solutions. One company, PhylloTech, received NSF support to adapt its plant-based platform to scale up the production of an Ebola antibody used in an experimental biopharmaceutical called ZMAPP™ -- currently the only available treatment for the deadly virus. Learn more about plant antibodies in this NSF Impact.

02

Powering advances in wireless connectivity for the future

NSF is supporting the development and deployment of the first two Platforms for Advanced Wireless Research (PAWR), based in Salt Lake City and New York City. These platforms will power research motivated by real-world challenges on experimental, next generation wireless testbeds at the scale of cities and communities. The goal is to advance the state-of-the-art for wireless technology beyond today's 4G, LTE and emerging 5G capabilities. Learn more in this NSF News Release.

03

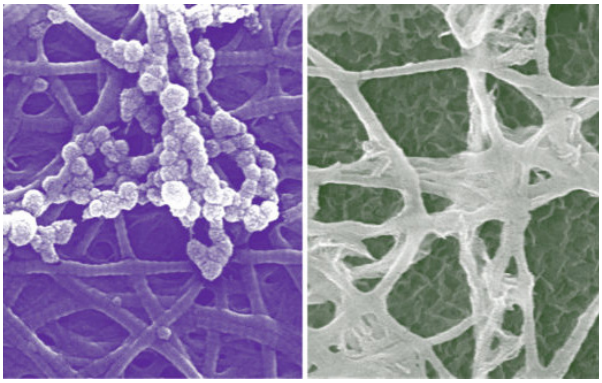
A best-kept secret: STEM research at tribal colleges and universities

NSF's Tribal Colleges and Universities Program (TCUP) presents a documentary showcasing examples of original research being conducted by students and faculty at tribal colleges and universities, as well as insights into the students' academic success and aspirations, and what STEM research means to them. Learn more by watching this NSF Video.

04

New cellular insights in bone development

Most of us don't think about our teeth and bones until one aches or breaks. A team of engineers at Washington University in St. Louis looked deep within collagen fibers to see how the body forms new bone and teeth, seeking insights into faster bone healing and new biomaterials. Read the full story in this News From the Field item.



05

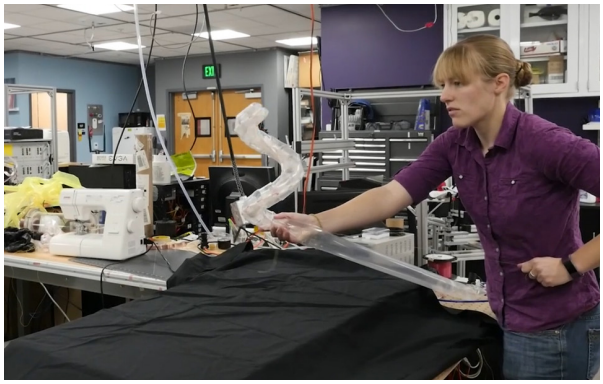
2018 Community College Innovation Challenge (CCIC) finalists announced

CCIC seeks to strengthen entrepreneurial thinking among community college students by challenging them to use science, technology, engineering and mathematics (STEM) to find innovative solutions to real-world problems. Each student team works with a faculty mentor and industry partner to develop STEM-based solutions. Finalists attend an Innovation Boot Camp in Alexandria, Virginia, in June, sponsored by NSF and the American Association of Community Colleges. At the boot camp, students interact with entrepreneurs and experts in business planning, stakeholder engagement, communications and marketplace dynamics. Find out which community colleges made it to the final round in this NSF News Release.

06

Soft 'vine robots' grow into solutions

Animals inspire many designs for robots, from the gecko-inspired StickyBot to RoboBees. But, mechanical engineers at Stanford University looked to the plant world for bio-inspiration. Learn more about this emerging area of robotics engineering in this NSF Science Nation video.



07

Where's the greatest risk of a mosquito bite in Baltimore? A surprising answer

Where's the greatest risk of a mosquito bite if you live in Baltimore, Maryland? Scientists studying Baltimore neighborhoods where residents have low, median or high incomes say that people are most at risk in areas with median incomes. Their results offer some intriguing reasons. Find out more in this NSF Discovery.

08

NSF announces Graduate Research Fellowships for 2018

NSF's Graduate Research Fellowship Program (GRFP) has announced the offer of 2,000 fellowship awards, following a national competition. The program recruits high-potential, early career scientists and engineers and supports their graduate research training in STEM fields. Launched in 1952 shortly after Congress established NSF, GRFP represents the nation's oldest continuous investment in the U.S. STEM workforce. Learn more in this NSF News Release.

09

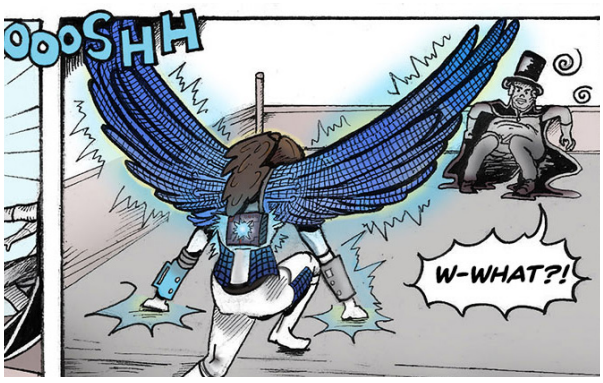
Developmental psychologist receives 2018 Alan T. Waterman Award

NSF has bestowed the 2018 Alan T. Waterman Award, the nation's highest honor for early career scientists and engineers, on University of Washington social and developmental psychologist Kristina R. Olson. Olson is the first social scientist to receive the Alan T. Waterman Award since 2005. She is also the first woman to receive the award since 2004. NSF Director France Córdova will introduce Olson at an event hosted by NSF and the National Science Board in May. Find out more in this NSF News Release.

10

NSF announces 2018 winners for 'Generation Nano: Superheroes Inspired by Science'

The Generation Nano competition challenges middle and high school students to imagine novel superheroes who use the power of science and technology (S&T) to solve crimes or tackle societal challenges. Students tell their hero's story in a short comic or video. Experts judge the entries based on the submitter's use of S&T, creativity and artistic or technical quality. Find out the winners of this year's Generation Nano competition in this NSF News Release. Additionally, learn more about the competition and begin preparations for next year in this NSF Special Report.



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